

CAMBRIDGE SCIENCE PARK NORTH. PROSPECTUS

December 2021

Welcome



owns and operates Cambridge
Science park, abbreviated to 'CSP' in this
document. is proud to promote
development of Cambridge Science Park North,
abbreviated to 'CSPN' in this document.

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- **INTRODUCTION MOTIVATION**
- 2 CONTEXT **SITE & SURROUNDINGS**
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- **5** IMPLEMENTATION



Cambridge Science Park North

The next generation mid-tech science park

will plan, implement, and steward a vibrant and collaborative employment community providing essential skilled-manufacturing space to support local companies and the city in delivering jobs through Net Positive development that requires no public funding.



Cambridge Science Park (CSP)





will deliver a much needed employment location that is a Net Positive exemplar and adds social and community value to north Cambridge and surrounding villages.

Cambridge Science Park North (CSPN)

CSPN will be an extension of, and benefit from the successful innovation ecosystem of the globally renowned Cambridge Science Park and surrounding North East Cambridge cluster.



1.5M 3,500 620 £220M £75M

Absorbed within 10 years, under medium growth projection

New jobs across a diverse range of skills when fully operational

Apprenticeship over the first 10 years of operation

Annual GVA once fully operational

Annual tax revenues once fully operational

Net Positive Environmental Impact from every phase





CSPN will add much needed strength, diversity & inclusion to our community

MOBILITY HUB BUSWAY & CYCLE ROUTES TO WATERBEACH ON-SITE ENERGY, CIRCULAR MATERIALS, WATER HUB HOLISTIC WATER MANAGEMENT CAMBRIDGE REGIONAL **COLLEGE TEACHING FACILITIES** LINK TO CAMBRIDGE **REGIONAL COLLEGE** CAMBRIDGE

REGIONAL COLLEGE

CAMBRIDGE SCIENCE PARK

The masterplan framework provides long term growth to meet midtech need that balances environment, mobility, social value, and circular economy into a compact yet low density campus.

Development Potential:

USES	APPROX. SIZE (SQFT)
R&D and Manufacturing	316,000
High Density Manufacturing	548,000
Low Density Manufacturing	450,500
Supporting Office Space	260,000
Community Hubs	56,900
Retail	45,900
Community	120,500
Education	148,000
Hub	332,000
Energy Centre	40,700 (Parcel size)
Water Treatment	57,000 (Parcel size)
Material Storage	79,000 (Parcel size)





CSPN will expand and diversify jobs

CSPN will be an exemplar for future manufacturing, Industry 4.0, and the green economy in the UK.

Mid-tech is a fast-growing sector, employment across Greater Cambridge has increased by more than double the average growth rate for the region.

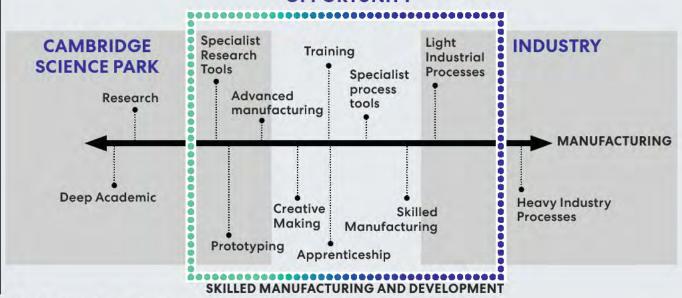
CSPN is perfectly placed to deliver much needed space for new and growing businesses at the intersection between research and manufacturing.

Cambridge Science Park North will connect research, training, and manufacturing in Cambridge and the UK.





CAMBRIDGE SCIENCE PARK NORTH OPPORTUNITY

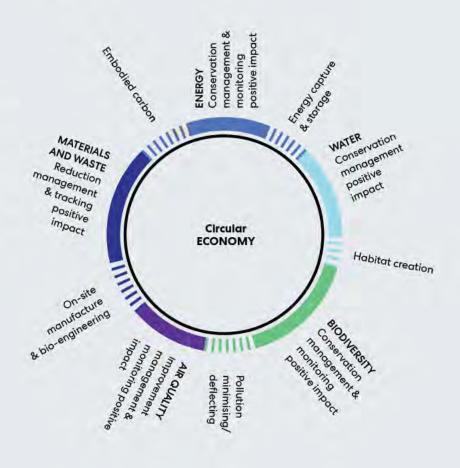


CSPN is the best place to create green and skilledmanufacturing jobs needed to support the city's research cluster.



CSPN will be pioneer for smart systems, resilience and wellbeing.

CSPN includes innovations that take the development beyond best practice climate change and circularity policy into a Net Positive bracket.



- + Education
- + Innovation
- + Game-changing

Diagram shows the interconnected framework of sustainable systems included in the design concept for

Smart Transport and Mobility

Congestion will be eased for the wider north Cambridge area by creating:

- GCP busway stops and new northward route
- Mobility hub interchange and Park & Ride
- CSP zero net increase in parking
- Expansion of existing electric bike programs
- AV pilot programs
- All private vehicles will be required to be left in the shared parking at the mobility hub
- Pedestrian and cycle will have priority with only limited vehicle carriageway provided

A smart multi-modal network, including a new network of safe separated cycle and pedestrian paths across the site will connect to routes within and beyond the city enhancing travel options for local people.









Environmental Value

CSPN will be a pioneer of environmental initiatives including circular economy management, integrated green transport, biodiversity enhancement, energy management, and smart buildings. It will also provide a test-bed for companies developing sustainable products and services in Cambridge and across the UK.

Green Infrastructure: 50% of the ownership is proposed as a publicly accessible country park delivering more than 20% biodiversity net gain.

Community

is committed in bringing people together and make great places to work and collaborate.

CSPN will provide much needed teaching space for Cambridge regional College in close proximity to the existing campus and create opportunities for significant annual opportunities for apprenticeship programs.

Histon & Impington and Kings Hedges will directly benefit from amenities that CSPN will bring to the area.







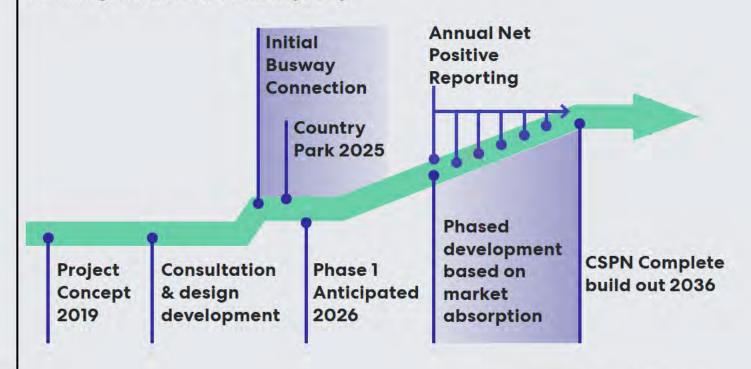
Delivery

has a long standing reputation as a steward and ambassador of quality development within Cambridge.

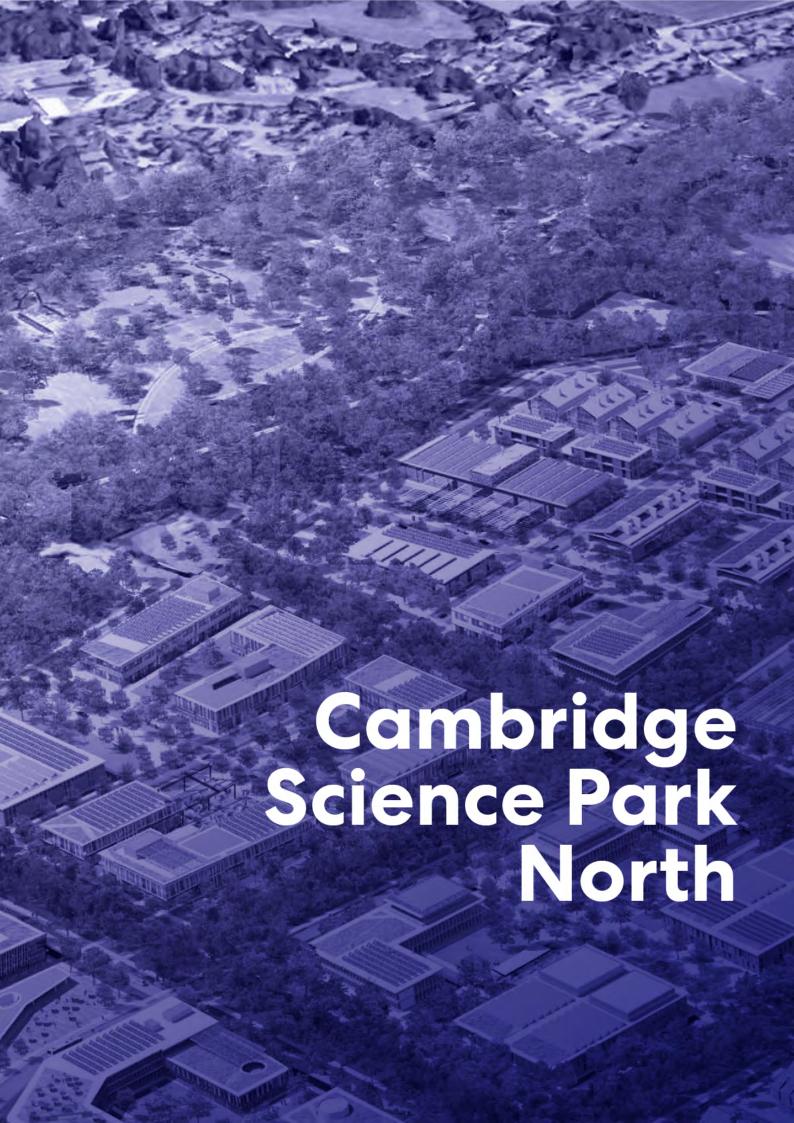
CSPN will exemplify
Trinity's commitment
to investing early in
enabling infrastructure,
landscape, and mobility
in order to achieve Net
Carbon Positive at every
stage of development.

Now is the time to deliver for the next generation: Mid-tech Science Park... CSPN.

Cambridge Science Park North Trajectory







Introduction

The city of Cambridge is an economic powerhouse with a world-leading reputation for research and innovation. The high-value economic activity taking place across the city delivers productivity and prosperity locally, regionally and across the UK.

, through Cambridge Science Park, has been at the forefront of providing economic growth for Cambridge since the 1970s.

Cambridge is forecast to grow by an additional 58,500 jobs between 2020 and 2041. This growth needs to be diverse and accessible to all through a wide range of job opportunities.

All the evidence and studies conclude that the midtech activity is more productive, exports more and is accessible to a wider range of residents than other industries.

With rents continuing to rise, demand substantially outstripping available space at the existing Cambridge Science Park, and no opportunity to introduce new manufacturing facilities to co-locate with research, a complementary expansion is now required - Cambridge Science Park North.

Mission Statement:

will plan, implement, and steward a vibrant and collaborative employment community providing essential skilled-manufacturing space to support local companies and the city in delivering jobs through Net Positive development that requires no public

Vision Statement: A vibrant collaboration community of new and growing companies nestled in 90+ hectares of stunning parkland, accessible by sustainable transport, and demonstrating long-term environmental and community value.

funding.



CSPN is located on the north side of Cambridge adjacent to the Cambridge Regional College on the existing guided busway.

Our Commitments

is committed to creating a sustainable future for Cambridge. In order to do this in an equitable and inclusive way there are many overlapping needs of the community which can be successfully addressed by CSPN.

The needs:

Of the Community

- Delivering mobility and access
- Efficient delivery and servicing
- **Enabling well-being**

Of the Environment

- Enhancing biodiversity value
- Increasing accessibility to green space
- Reducing carbon emissions
- Managing and conserving water
- Growing food

Of the Economy

- Diversifying jobs
- Filling gaps in the talent pool
- Shortening supply chains

commitments:

To the Community

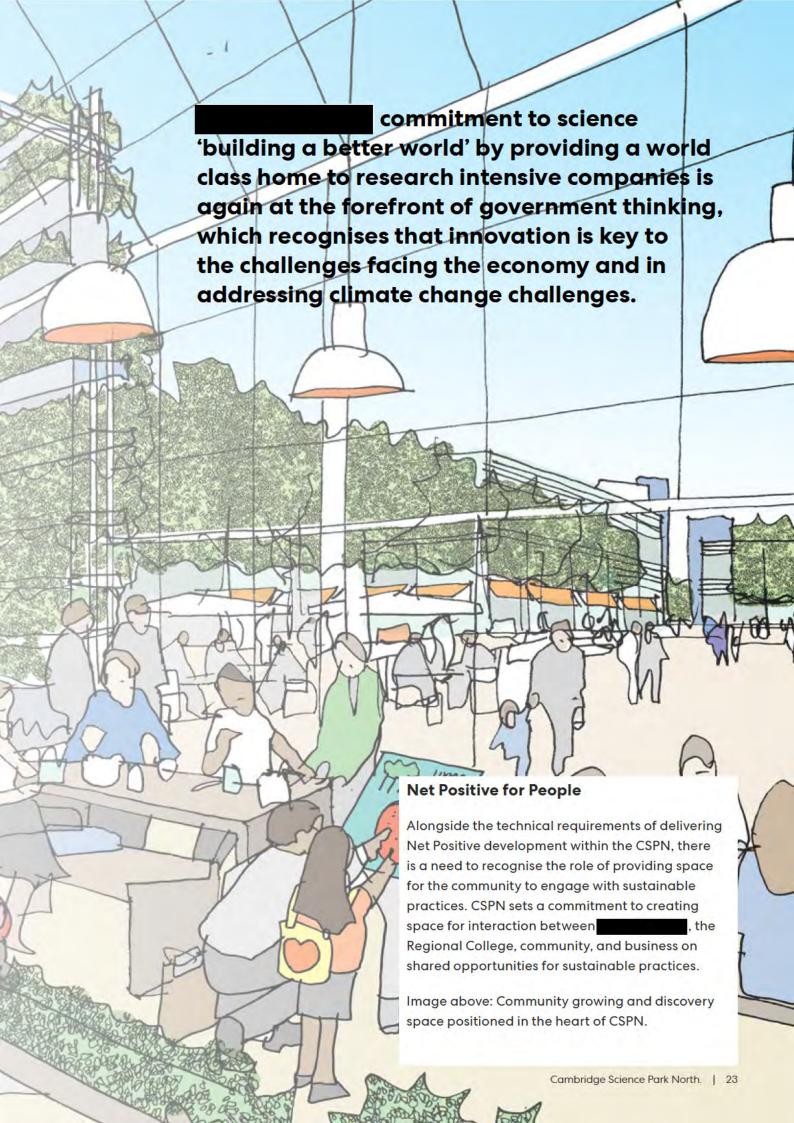
- Investment in movement corridor and mobility hubs
- Adopt smart logistics strategy
- Pedestrian priority & safe new walking/cycling trails

For the Environment

- Ecological protection and enhancement
- 90 hectares of country park open to the community
- On-site renewable energy and sharing
- Sustainable drainage and water recycling
- Allotments and community growing

For the Economy

- Provide mid-tech in close proximity to research
- Provide education space
- Provide materials management infrastructure



Context

Cambridge is located within the Golden Triangle and anchors the eastern end of the OxCam Arc. Cambridge plays a critical role in the UK's economy and attracts international investors and companies.

Cambridge is a cluster of knowledge intensive companies. Within the city, Cambridge Science Park is part of the greatest concentration of high growth companies across many fields of critical research and development.

The CSPN site has been strategically identified at a critical focal point in the cluster, adjacent to the North East Cambridge district and walking distance from Cambridge Science Park.

CSPN is positioned within close proximity to the highest concentration of proposed new housing in Cambridge providing a sustainable location for future residents.

CSPN is easily accessible from the existing high capacity busway and bus connections. It will further benefit from planned new busway connections to Waterbeach and north to Ely.

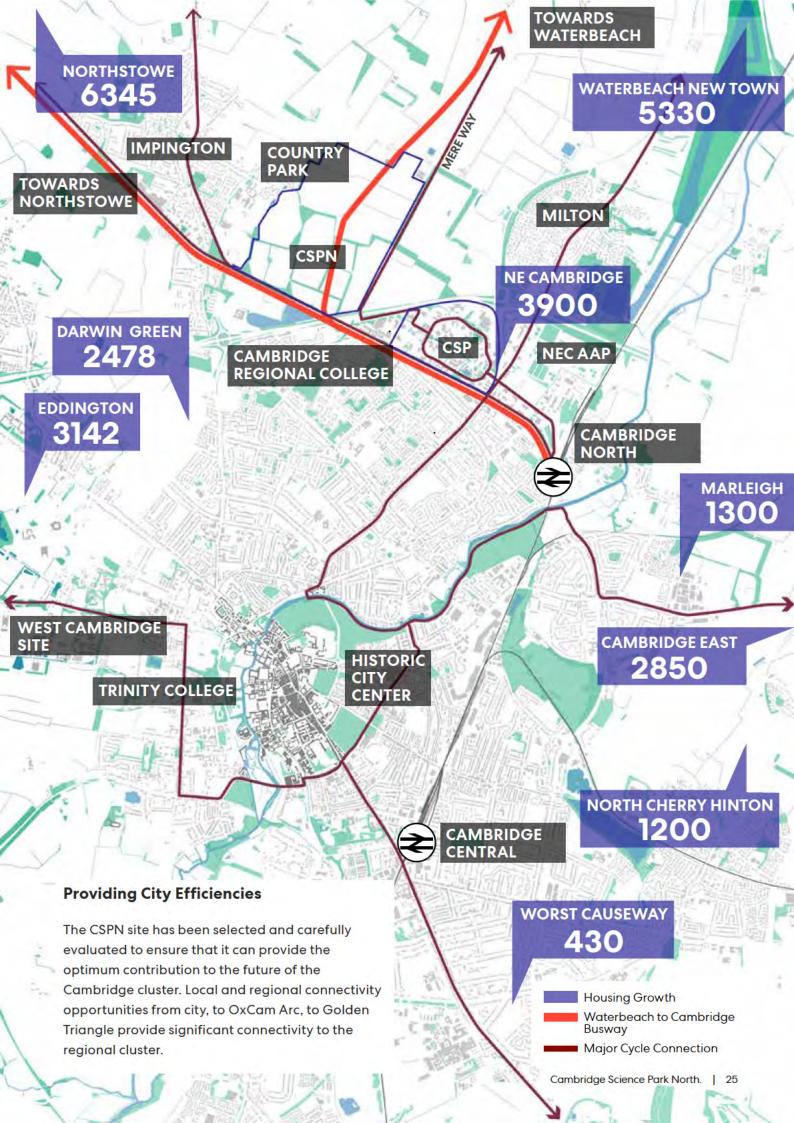
The site is connected to local cycle routes including links through to Orchard Park Milton Road and the Chisholm Trail towards the city centre. Mere Way provides a direct walking/cycling link to Waterbeach.

"World-class R&D space needs support from nearby flexible mid-tech locations to allow industry growth and company maturation"

British Council for Offices research 2019: The Future of Business Parks



Conceptual diagram of the Arc and Triangle locating CSPN as part of the core provision for global and local sustainable employment provision.



Site and Surroundings

CSPN is adjacent to the North East Cambridge (NEC) Area Action Plan District. NEC is planned to deliver a wide range of new homes and allows for additional laboratory space within the existing Cambridge Science Park.

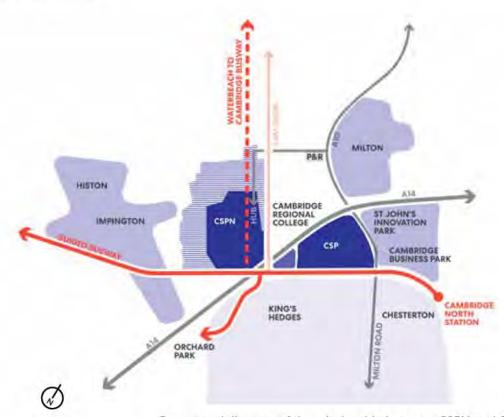
Connecting in two places under the A14, CSPN is approximately 5 minute walk from the Cambridge Science Park.

Walking routes connect past the Cambridge Regional College, placing the College at the interface between research and manufacture.

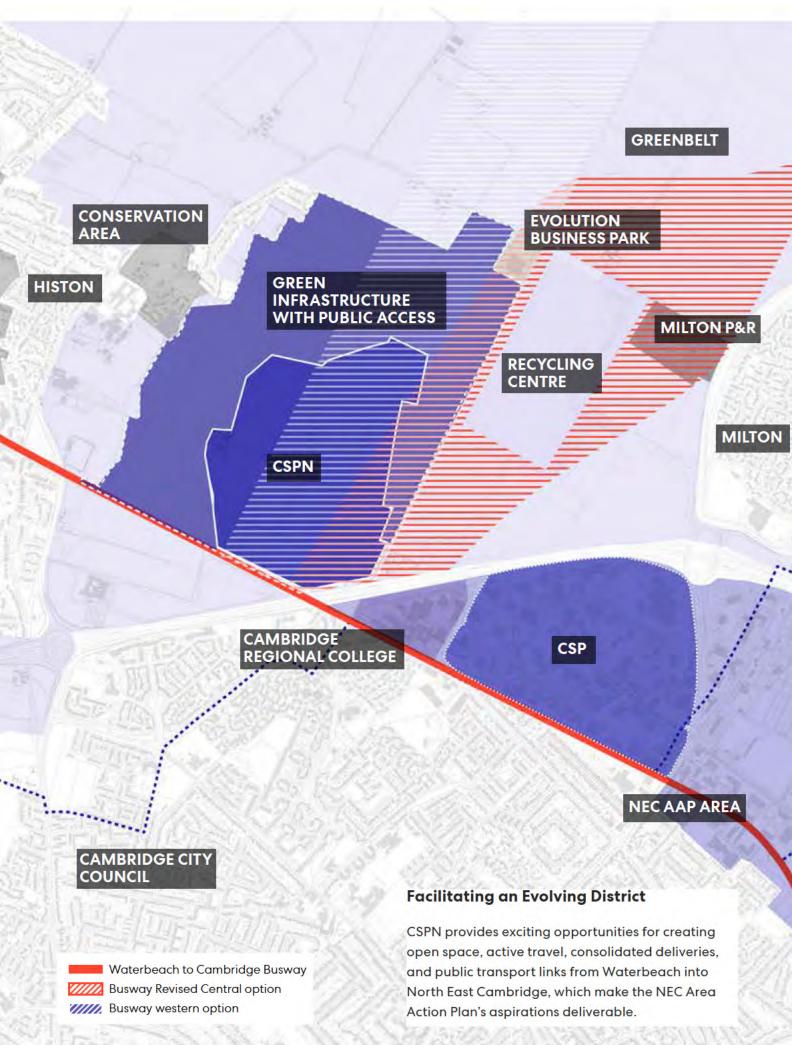
To the east, and depending on the final alignment of the GCP busway, the CSPN connects to the Park and Ride and then north to Waterbeach.

CSPN is located on the northern side of the City. The land is currently low grade agricultural land within the Green Belt. The site is currently inaccessible to members of the public. The site is not located within a flood zone and does not have any other environmental constraints to development.

An early driver for the site has been to create a Country Park to form an accessible, permanent development buffer to Histon and Impington Village protecting its setting and providing significant environmental benefits.



Conceptual diagram of the relationship between CSPN and CSP connecting across the Cambridge Regional College through busway, cycle lane and walking connections.



Site Concept

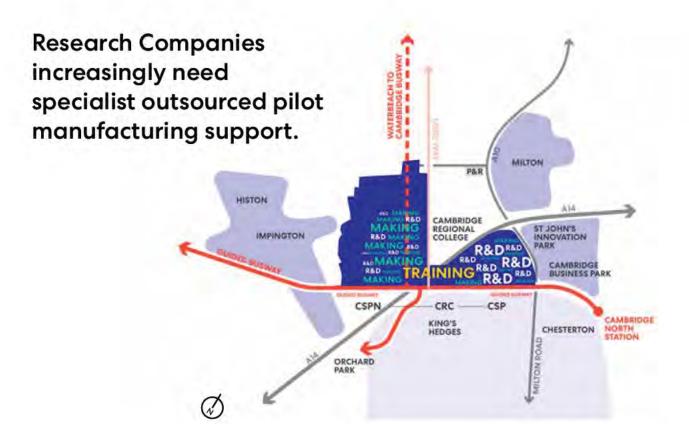
The concept for the site takes the opportunity to connect CSP and the wider AAP area to a new low density skilled-manufacturing and making district.

The CSPN concept provides a home for dynamic and innovative companies with people-centric buildings and spaces for low density making, which is wholly complimentary to and not competitive with the research focus of CSP.

The concept places the CRC at the fulcrum between research and making, the critical elements of the Cambridge cluster, and connects them via a new 'green loop' walking/cycling trail.

A strategic green corridor has been formed connecting habitats to the north of Cambridge through the permanent and rich habitat of the Country Park to existing green infrastructure in the city.

The site's natural features have led to a design that forms connected pockets of development that provide diverse and characterful opportunities for social, community, and innovation through interaction and collaboration.



High level concept of mixing making and research in a complementary way between CSP and CSPN while providing opportunities for apprenticeships and additional facilities for CRC to foster the next generation of entrepreneurs.



Creating a Cohesive District

CSPN fills the gap in provision of manufacturing and making space within the Cambridge cluster. This allows greater resource efficiency, shorter supply chains, and advances to Net Positive employment at the same time as providing new environmental and community benefits..

Engagement and Evaluation

is committed to delivering Net

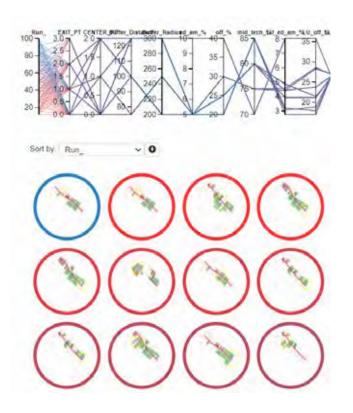
Positive development and community value through this project.

At the very early stage of concept master planning significant detail has been pursued through analysis of the necessary targets and KPIs which will embed a sustainable approach.

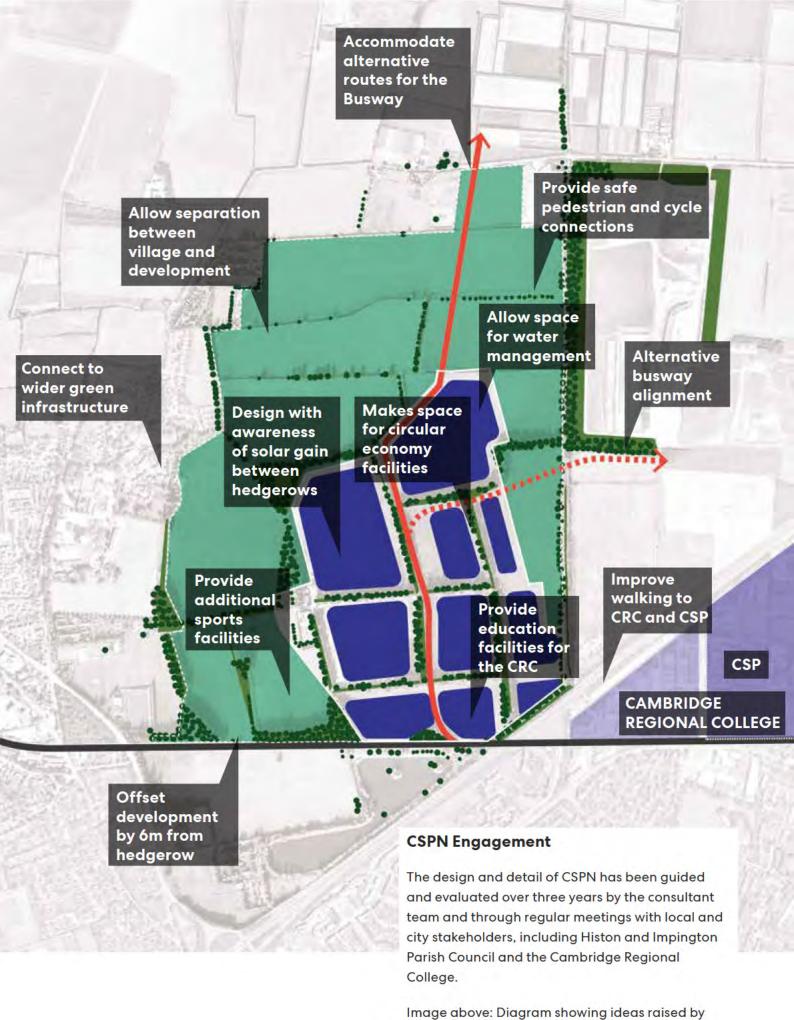
In order to set out commitments made by meetings have been held with a wide range of stakeholders. Engagement will continue to expand as the project develops.

To date, meetings have been held with groups including:

- NEC AAP Team
- **NEC AAP Landowners**
- CRC
- **GCP**
- Companies and Businesses in Cambridge
- H&I Parish Council
- Impington Village College
- Ward Members
- **County Councillors**
- Lead members/Portfolio Holders
- Mayor of Cambridge
- **Combined Authority**
- Smarter Cambridge



Generative design and process lab evaluation tested 100+ variations on the site layout to understand opportunities for solar energy, reducing visual impact, and providing a compact development.



stakeholders in developing the CSPN master plan.

Net Positive Campus Masterplan Framework

The site identified for CSPN has been selected due to it proximity to the existing Cambridge Science Park, and many other beneficial aspects of proximity to existing communities, future housing, sustainable travel options.

The approach to the CSPN design has been to create a framework which:

- Works with the existing elements of landscape value on the site to create parcels of development nestled within habitat networks,
- Provides in excess of 20% biodiversity net gain to low grade agricultural land,
- Manages water and drainage as part of a holistic site-wide approach
- Provides systems for a true circular economy for CSPN and CSP

The following areas have been specifically targeted for their role in creating a Net Positive project:

- Natural systems and biodiversity
- Resource use and circular economy
- Sustainable buildings
- Connectivity and mobility
- Employment mix and diversity
- Quality design
- Community value

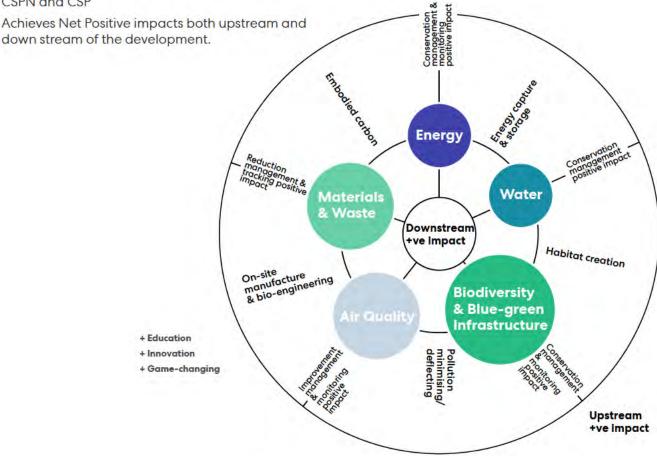
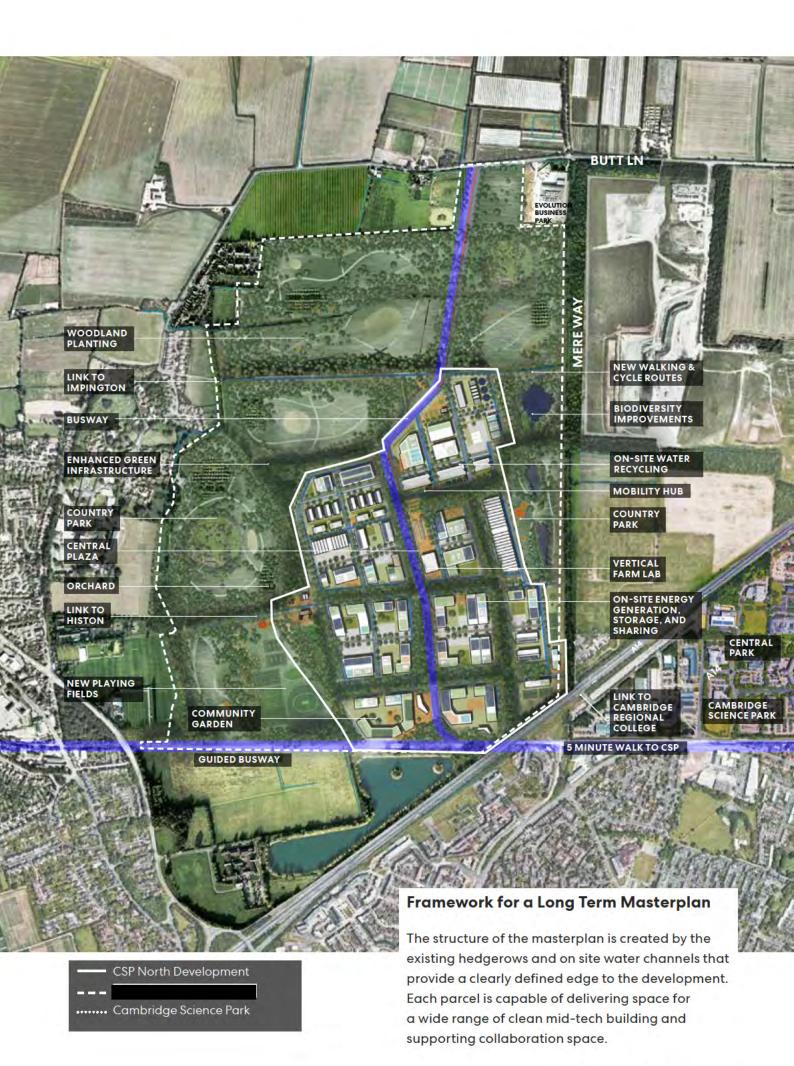


Diagram shows the interconnected framework of sustainable systems included in the design concept for CSPN.



Net Positive Campus: Natural Systems

The current low grade agriculture quality of the land offers an opportunity for 20% biodiversity net gain as part of the carefully considered investment and management by

Protecting and extending existing hedgerows, trees and natural water systems across the site and beyond the site boundary aligns commitments across both CSP and CSPN.

The commitment to dedicate +50% of the ownership to a country park managed by offers substantial opportunities for a diverse range of habitats, new woodland, and lakes.

This permanent parkland will form a protected and biodiverse green corridor linking habitats in north Cambridge to green infrastructure in west Cambridge ans a green loop connecting Milton Country Park and lakes to CSPN.

CSPN will offset the impact of removing land from the Green Belt through substantial environmental quality and accessibility improvements.

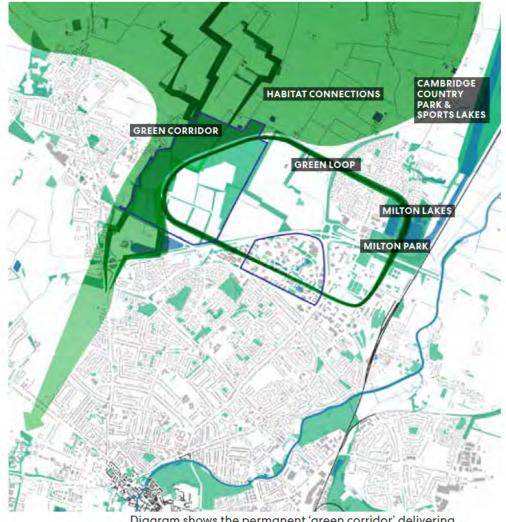
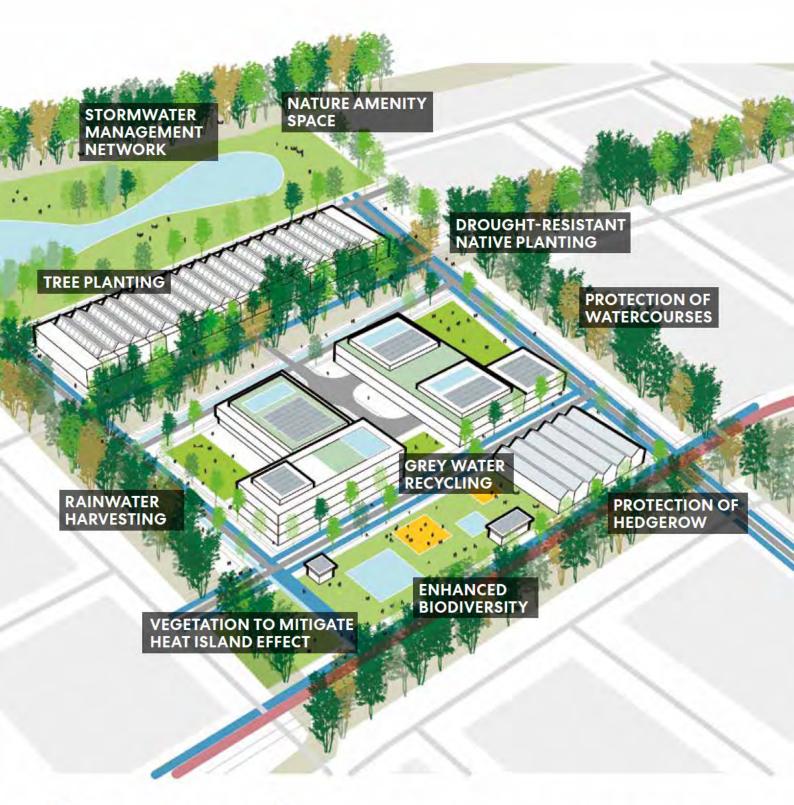


Diagram shows the permanent 'green corridor' delivering substantial biodiversity enhancements and 'green loop' connecting nature and recreation.



"In excess of 20% Biodiversity **Net Gain**"

Framework for a Natural Systems Led Approach

From protecting hedgerow to design of holistic sustainable drainage, and coordinated green roof/ wall corridors the CSPN framework provides for strategic natural systems protection.

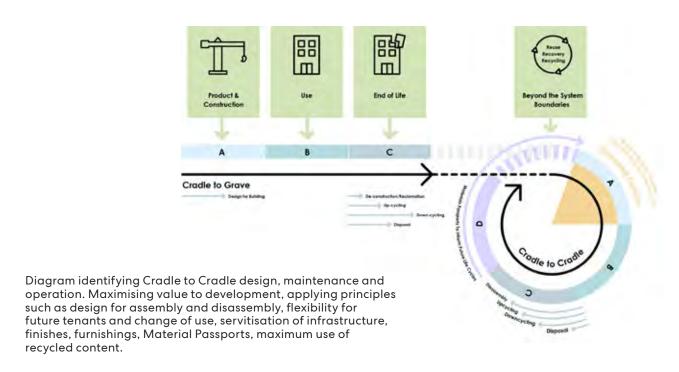
Net Positive Campus: Resource

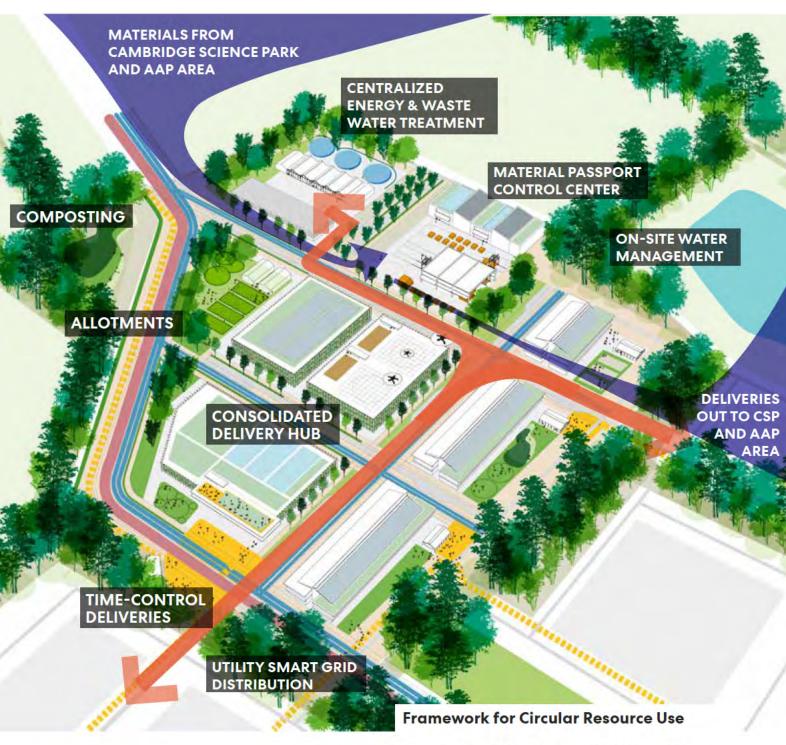
Cambridge Science Park North is setting ambitious energy use intensity, whole life-cycle carbon emissions, water consumption and material use targets.

Over and above resource conservation and operational monitoring, CSPN includes innovations that take the development beyond best practice climate change and circularity policy into a Net Positive bracket.

The CSPN strategies include recovery, storage and sharing of recovered waste energy and renewable energy; designing for demountability and future adaptation and on-site manufacturing; recovery, storage and up-cycling of construction material; piloting innovations such as bio-engineered cladding, material passports and community-level wastewater recycling and reuse.

The ability to instigate a Circular Resource campus are at the forefront of Cambridge Science Park & CSP North concept. The benefits are local in immediate implementation, but potentially globally influential as ideas and initiatives piloted here become the benchmark standard around the world.





Identification of source, recording of use, and long term re-application of materials is an essential component in the CSPN framework for reaching Net Carbon Positive goals. Parcels have been allocated and integrated into the design to effectively provide on-site consolidation and efficiency of resource use.

Net Positive Campus: Buildings

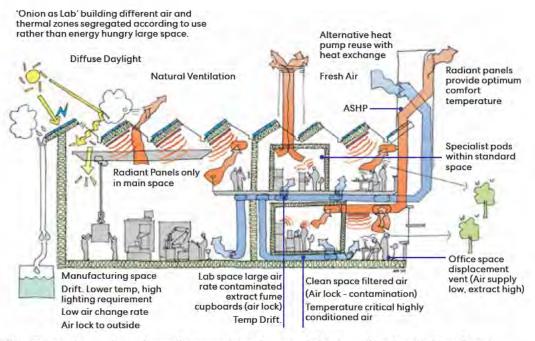
The future buildings within CSPN will be unlike any other cluster of manufacturing and maker space in the uk.

- Inside the buildings the use of materials will create healthy and wellness environments.
- The form will respond to current and future climate, creating space that is thermally, visually and acoustically comfortable and inspiring.
- Outside the buildings instead of typical parking areas there will be spaces for outdoor meetings, plazas for gathering, and gardens for socialising.

The buildings will be able to connect into the shared sustainability support systems and will be expected to adopt orientation, position, and facade treatment which contribute to delivering sustainable and resilient designs that contribute to the overall campus.

Construction methods will employ a **circular approach to reduce the resource use** and emissions, and add long term value to buildings.

Buildings will optimise glazing-to solid ratios, natural ventilation, energy efficiency, site energy networks and generation of renewable energy on site which can be shared locally.



The illustrative section above demonstrates the principles for achieving high performing buildings suitable for a range of Mid-tech and manufacturing uses appropriate within CSPN.



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Hours

All buildings within CSPN will be designed to deliver Net Positive goals individually as well as part of the overall campus. In order to do so, early evaluation of the site in terms of is optimum locations for photovoltaic energy generation and shade/subpath for facade design has been incorporated into the early concept.

Image above: The diagram above provides an example of early annual solar analysis to identify preferred building orientation and positioning within the site in relation to retained hedgerow.

Net Positive Campus: Connectivity

CSPN has the opportunity to reduce congestion in north east Cambridge by:

- The introduction of the new GCP busway stops and route delivery
- Consolidated mobility hub including Park & Ride facilities serving CSPN, CSP and wider NEC area
- A zero net increase in parking from Cambridge Science Park,
- Expansion of existing electric bike programs
- Autonomous vehicle pilot programs

Time-saving new mobility choices and parking options within Cambridge Science Park North are critical to the successful delivery of North East Cambridge (NEC) as a whole district by releasing pressure on the Milton Road.

Within CSPN, all private vehicles will be required to be left in shared parking at the mobility hub creating a culture of sustainable travel, improved people connections, and freeing up space for areater sustainable features.

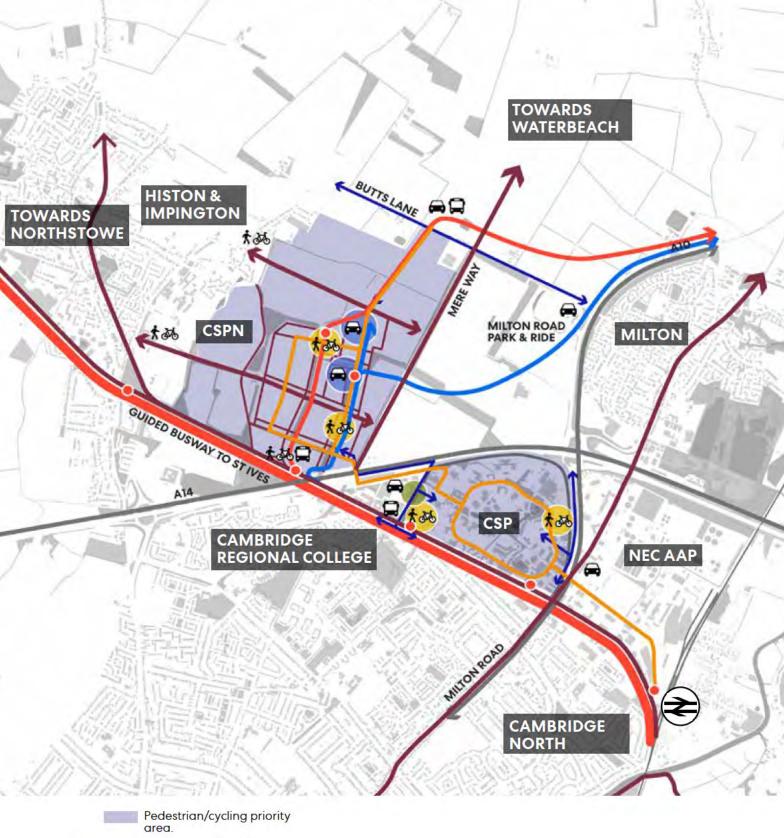
The framework of streets within the development will be pedestrian and cycle first with only limited vehicle carriageway and access only for essential deliveries or permitted vehicles.

A consolidation logistics Hub CSPN will help reduce delivery vehicle movements across the wider NEC district, making cargo bikes, electric vans or drones possible.

Uniquely, CSPN can balance parking demand from the current Cambridge Science Park by diverting traffic movements away from existing areas of congestion.



Mobility proposals for CSPN are part of a coordinated systems covering CSP and the wider AAP and North East Cambridge Area. These alleviate traffic congestion through alternative routes and high capacity modes.



Busway Western Route

Busway Northern Route

Road access points Road links

Shuttle pods route

Pedestrian/cycling network

Primary Mobility Hub Secondary Mobility Hubs

Tertiary Mobility Hubs

Bus Stations

Easing Congestion in North East Cambridge

Connectivity is a regional question but a person level experience. CSPN has focused on creating the best possible interchange experience for promoting active and sustainable travel choices. It's restricted vehicle streets allow pedestrians, bike, and bike couriers to set the pace and connections.

Net Positive Campus: Mixed Employment

Cambridge is a leader in commercial research. CSPN will create jobs in industry sectors that are needed and that **expand and diversify the Cambridge economy and support growth in the UK** as a whole

- For example, mid-tech industries export 41% of

 For example, mid-tech industries export 41% of turnover compared to 33% for manufacturing on average.

Existing businesses currently struggling to find flexible manufacture and prototyping space will benefit from the opportunity to 'grow-on' and 'scale up' within close proximity to world class research at Cambridge Science Park.

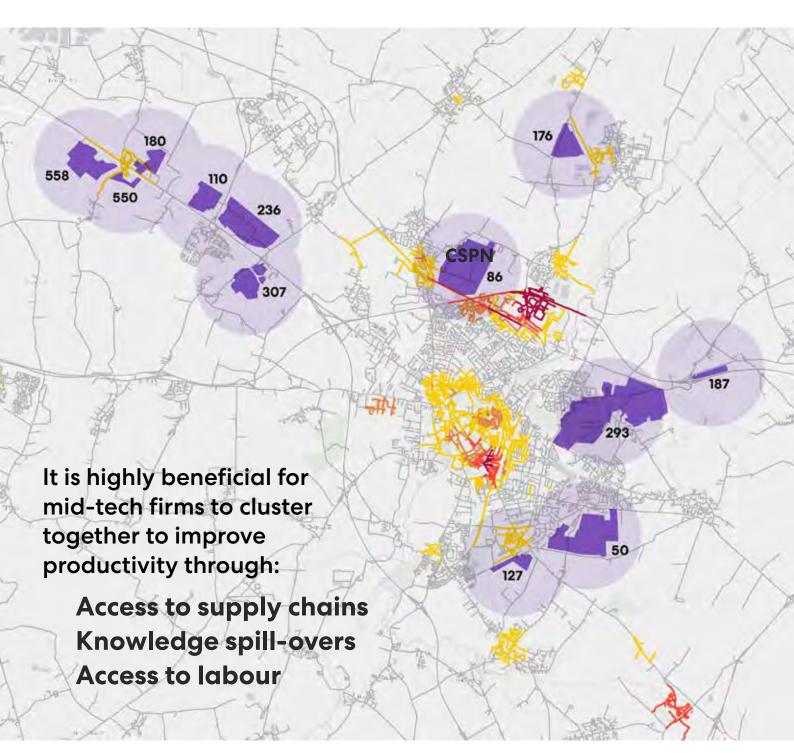
The framework for mid-tech use is intentionally flexible in floorplan allowing a range of smaller independent units scaling up to a single large companies with multiple production lines.

The building scale will remain at 1-3 floors due to the focus on production with only ancillary office space.

CSPN will offer opportunities for employment and up-skilling residents in the local area, providing the types of jobs suitable for a wide range of skill levels

CAMBRIDGE SCIENCE PARK NORTH OPPORTUNITY Specialist Light INDUSTRY Training Research Industrial CAMBRIDGE Tools **Processes** Specialist SCIENCE PARK process Advanced tools manufacturina MANUFACTURING RESEARCH Deep Academic Heavy Industry Creative Skilled **Processes** Making Manufacturing Prototyping Apprenticeship SKILLED MANUFACTURING AND DEVELOPMENT

Cambridge Science Park North will connect research and manufacturing in Cambridge and the UK.





Employment for an Evolving Sector

Mid-Tech is an emerging sector that can defy description. It is built on a pre-requisite for flexibility, adaptability, diversity, and innovation. Entrepreneurial companies that need this space may be small but operate within a connected network that allow for collaboration and rapid innovation.

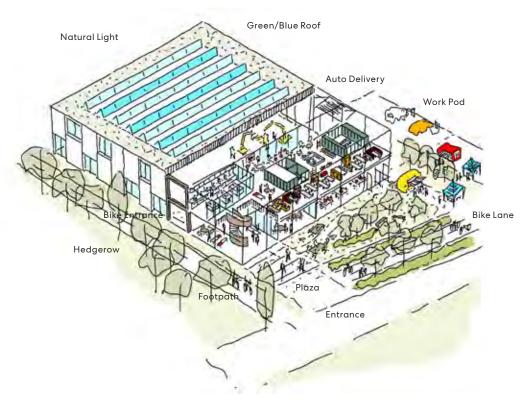
Image above: Geographic Information Systems analysis of concentrations of high growth companies and their relationship to Call for Sites locations.

Net Positive Campus: Quality Design

The next generation of skilled manufacture buildings will be very different from today's industrial parks:

- The buildings will be of far greater sustainable qualities, the layout of the buildings will create human scale spaces which encourage people **interactions**, the variety in the architecture will create distinction between units and identity of spaces including artwork and personalisation.
- The inside activities will increasingly be put **on display** and elements of building use, like meetings and social activities, will spill out into the space around buildings.
- Servicing will be coordinated and centralised making it convenient but discrete. Servicing will not impact the people spaces. This will be facilitated by an increase in the adoption of autonomous systems.

CSPN embraces and leads the thinking on this transformation of the UK's manufacturing sector by the provision of a vibrant collaboration community of skilled manufacturing enterprises.



Concept sketch of the qualities of CSPN Mid-tech buildings far in advance of typical industrial sheds and light industrial manufacturing facilities.



UCL Pearl Main Entrance elevation



Inside the lab space, with the 'The Groove' to the right.



View of arrival and community space, free-standing 2 story timber structure



Vitsoe large windows connect to nature



Vitsoe natural light for manufacturing floor



Vitsoe wild-flower meadow planting around building.



Milton Park 2040 Vision



Springdale General creative class maker buildings



Framehouse sustainable office space by SHL

Raising design quality expectations

The mid-tech buildings within CSPN have the opportunity to change perceptions about what is achievable within manufacturing and makerspace developments. These buildings will foster community and collaboration, they will provide light, naturally ventilated work spaces, breakout spaces from building into nature rather than parking, and materials that are relaxing and in harmony with the site.

Net Positive Campus: Community Value

Quality access to open space is identified as a key contributing factor in public health and personal well-being. Despite the existence of green belt land around Cambridge there is a shortage of publicly accessible open space and provision of sports facilities for the community, local schools, and the Cambridge Regional College.

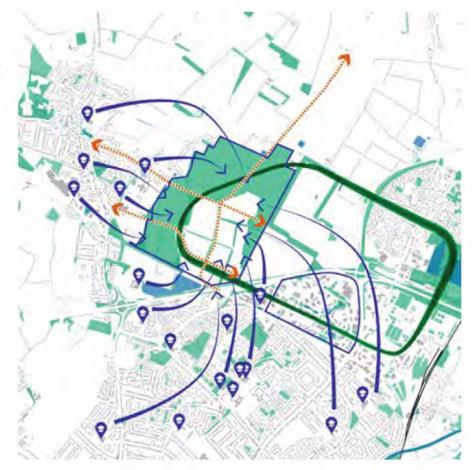
The local communities within **Histon and Impington** and **Kings Hedges will directly benefit** from the creation of new open space amenities and sports facilities.

As CSPN will be an open campus with other amenities and communities facilities there will be greater reason to visit the park. Events during the week and at the weekend as part of CSP and outreach and education programs will

enliven the campus and bring people together.

Facilities provided within CSPN for CRC will **provide much needed teaching space** for the college in close proximity to the existing campus and create opportunities for significant annual opportunities for apprenticeship programs.

Greater Cambridge
has 6.1 apprenticeship
starts per 1,000
of the population,
compared to 13.3 for
the East of England.
CSPN can help
address the evident
high barriers to job
opportunities within
the city.





Local schools within the area will be able to actively engage with programs at CSP and CSPN made even more accessible through safe walking and cycling routes.



A Community Focused Hub of Activity

The community hub, positioned on the busway at the south of the CSPN Campus is the interface at the closest point to CRC and CSP. It will change the perception of the busway at this point into the gateway to Cambridge.

Implementation & Delivery

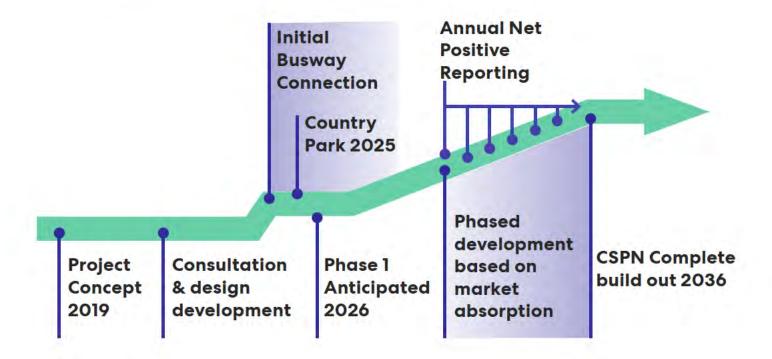
has a long standing reputation as a steward and ambassador of quality development within Cambridge.

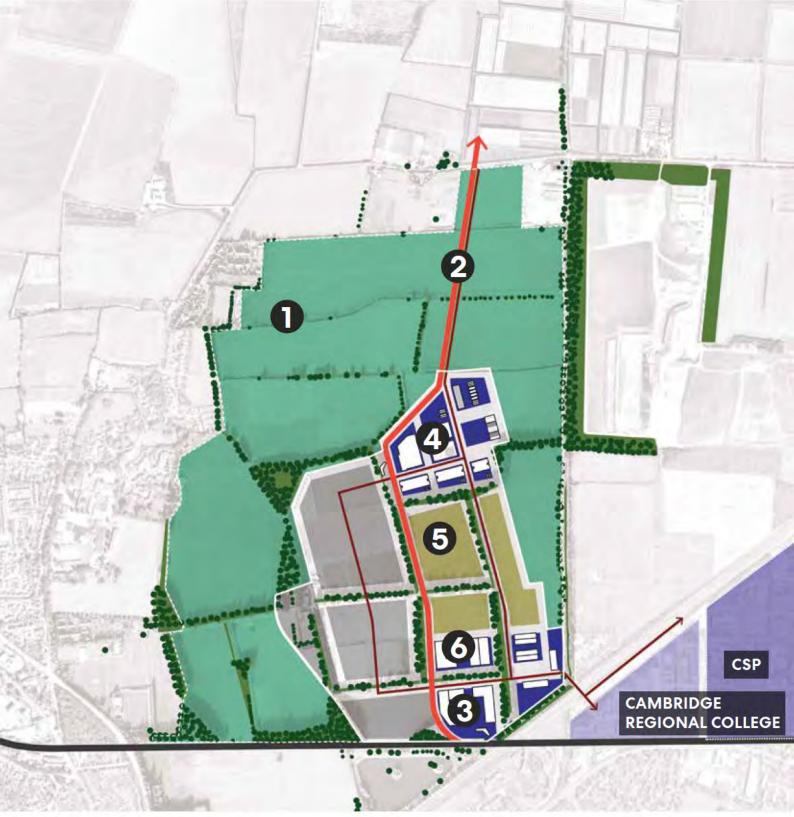
CSPN will demonstrate commitment to investing early in enabling infrastructure landscape and mobility in order to achieve Net Carbon Positive at every stage of development.

Beyond development stages there is a continued need to refine, demonstrate, and educate the ways in which CSPN and CSP will continue to deliver on its Net Positive commitment. Annual report cards will be produced the follow the structure of the sustainability framework for the site to allow the development's progress to be clearly tracked by the and the wider Cambridge community.

The framework set up by CSP and CSPN will be an exemplar for future manufacturing, Industry 4.0, and the green economy in the UK.

Cambridge Science Park North Trajectory





- Country park
- 2 Busway
- Community & Education
- 4 Sustainable infrastructure
- Meanwhile Uses
- Mid-tech

Early Commitment to Supporting Amenity

In order to deliver on its Net Positive commitments, CSPN will also deliver early on necessary infrastructure. This has been conceptually planned to identify efficiencies and requirements for sitewide utility systems and infrastructure. Meanwhile uses and programmed activity will form a precursor to future development phases.

A Vision for the Next Generation: **CSPN Mid-Tech Community**



Circular AND Positive

District-wide positive impact to North East Cambridge area delivering circular economy opportunities within a country park setting.



Next Generation Mid-Tech Space

For local entrepreneurs and innovators, benefiting the city, region and UK as a whole.



Sustainable Mobility

Delivery of mobility systems that REDUCE congestion in North East Cambridge.



Combined Community and Environmental Value

Creation and protection of natural habitats and community facilities which substantially outweigh removal from the Green Belt.



Cambridge Science Park North.

Perkins&Will